ABSTRACT OF THE DISCLOSURE

An organic light-emitting diode (OLED) device which produces substantially white light includes an anode; a hole-transporting layer disposed over the anode; and a blue light-emitting layer having a host doped with a blue light-emitting compound disposed directly on the hole-transporting layer and the blue light-emitting layer being doped with an electron-transporting or a hole-transporting material or both selected to improve efficiency and operational stability. The device also includes an electron-transporting layer disposed over the blue light-emitting layer; a cathode disposed over the electron-transporting layer; and the hole-transporting layer or electron-transporting layer, or both the hole-transporting layer and electron-transporting layer, being selectively doped with a compound which emits light in the yellow region of the spectrum which corresponds to an entire layer or a partial portion of a layer in contact with the blue light-emitting layer.